1908MNRAS..68..676H

Note on Y Cephei. By Rev. J. G. Hagen, S.J.

(*Communicated in a letter to the Astronomer Royal.*)

"The advance prints of your Astrographic Plates 3619 and 6983, which you kindly sent me for the examination of Y Cephei and its surroundings, have enabled me to measure the additional stars to the Atlas Chart of this variable which were invisible in the 12-inch refractor. They will be recorded in the Catalogue sheet No. 188 of series vi., with due acknowledgment.

"Since the magnitudes of this series are all reduced to the Harvard scale, it is well to put the magnitudes of Y Cephei, as shown on your plates, on record for future corrections of the elements of variation. The following extract from the Catalogue will designate four comparison stars :—

	m s	′	m	
No. 3.	$\Delta\alpha = -0$ 20	$\Delta\delta = -11$·5	H.P. 8·7	letter c
4.	,, +3 20	,, −12·1	,, 8·8	,, d
37.	,, 0 0	,, − 1·5	,, 12·7	,, ϕ
40.	,, +0 30	,, − 1·0	,, 13·1	,, τ

Your plates give the following estimates, which anyone can verify :—

Pl. 3619,	1897 Sept. 9 :	c2Y4d,	Magn. 8·7 H.P.
,, 6983,	1908 Jan. 12 :	ϕ4Y1τ,	,, 13·0 ,,

"The provisional elements of variation give the following corresponding epochs of maxima :—

Max. 1897 Sept. 24 = Plate 3619 + 15 days.
,, 1907 Nov. 26 = ,, 6983 − 47 days.

"The first plate agrees well with the computed maximum and with the remark of Ceraski (*A.N.* 3644) that the brightness of Y was diminishing in October 1897. The second plate, however, will probably demand a correction to the assumed elements (*A.N.* 3744 and *V.J.S.* 41, page 317), as it is unlikely that the star should have diminished in brightness by 4½ magnitudes in 47 days."

Rome: July 22, 1908.

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Corrections to Professor Turner's paper on Correlation,— (M.N., p. 551).

An unfortunate slip on p. 551 has been kindly pointed out by Mr. J. B. Dale.

Both σ_A and σ_B should have been divided by 3, the square root of the number of observations; so that

$$\sigma_A = 1{\cdot}15 \qquad \sigma_B = 0{\cdot}82$$

and

$$r = {\cdot}72 \text{ instead of } {\cdot}08.$$

The correlation between A and B is therefore by no means negligible as stated on p. 552, and again on p. 545.

The two "regression lines" are

$$(A - 7) = r.\frac{\sigma_A}{\sigma_B}(B - 7) \quad \text{and} \quad (B - 7) = r.\frac{\sigma_B}{\sigma_A}(A - 7)$$

or

$$(A - 7) = 2(B - 7) \quad \text{and} \quad (B - 7) = (A - 7)$$

which are the two solutions mentioned on p. 545 obtained by grouping according to B and to A respectively.

The example was subsidiary, and the slip does not affect the main argument; but it is not easy to understand how so gross an error passed undetected. H. H. T.

Errata in Mr. J. M. Baldwin's paper on Neptune.

p. 618, line 26, *for* include *read* exclude.

p. 620, line 4, *for* showing in *read* showing an.

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